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A New Psephenus and its Larva from Mexico (Coleoptera: Psephenidae)

Paul J. Spangler [1, 2, 3]

Abstract

The adult and larva of a new species of *Psephenus* from Mexico are described and illustrated. This is the fifth species of the genus described from Mexico.

Only four species of psephenid beetles, *Psephenus haldemani* Horn (1870), *Psephenus palpalis* Champion (1913), *Psephenus usingeri* Hinton (1934), and *Psephenus texanus* Brown and

[1] This study was made possible, in part, by Grant GB-1697 from the National Science Foundation.

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[3] Accepted for publication October 7, 1967.

Arrington (1967), have been described previously from Mexico. The distinctive new species described below was collected at an elevation of approximately 8,000 feet near El Salto in the state of Durango, Mexico. The unique male beetle was found resting above water on a partially submerged log in a small, cold and clear stream. Thirty-eight larvae were collected in the stream and are assumed to be the immature stage of this beetle.

I am grateful to my entomological colleagues from the Entomological Research Institute of the Canadian Department of Agriculture whom I visited at their camp near El Salto and who arranged the field excursion during which this new species was found.

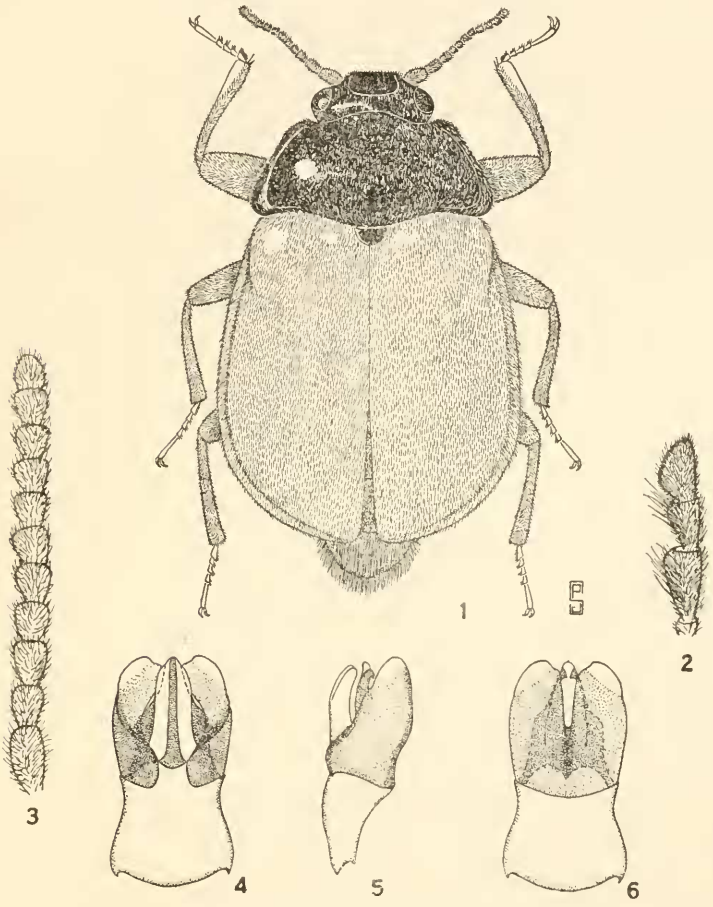
Psephenus oresbius NEW SPECIES

Length of holotype male 5.5 mm, greatest width 3.1 mm (Fig. 1). Head black except testaceous area directly behind eyes; pronotum and scutellum black. Elytra, antennae, legs, mouthparts and lateral margins of abdominal segments brown; prosternum, mesosternum, metasternum and middle of first three abdominal segments dark gray; hypopleurae and epipleurae testaceous.

Body flattened, subcuneate; head and pronotum densely covered with short black pubescence; elytra covered with fine, dense, suberect, yellowish brown hairs with longer and more erect hairs interspersed. Ventral surface with dense covering of yellowish brown pubescence.

Head densely finely punctate; ridged between eyes; vertex distinctly and broadly concave. Eyes prominent, hemispherical. Antennae (Fig. 3) densely pubescent, short, extending to base of pronotum; first segment longest, second and third segments subequal in length, remaining segments subequal and each slightly shorter than third. Clypeus and labrum arcuately emarginate anteriorly. Maxillary palpus (Fig. 2) four segmented, slightly less than one-half as long as antenna; basal segment smallest, about one-fourth as long as second segment; second segment one-third longer than third; third segment about three-fourths as long as fourth segment; fourth segment flattened and

broadly triangularly expanded, the outer side of apex glabrous when viewed from side. Labial palpus three segmented; basal two segments broad and subequal in length; third segment as long as but only two-thirds as broad as second segment and dark reddish brown.



FIGS. 1–6. *Psephenus oresbius,* new species, holotype. FIG. 1. Dorsal view. FIG. 2. Right maxillary palpus, dorsal view. FIG. 3. Left antenna, dorsal view. FIG. 4. Aedeagus, ventral view. FIG. 5. Aedeagus, lateral view. FIG. 6. Aedeagus, dorsal view.

Pronotum twice as wide as long; densely finely punctate except a short, longitudinal, glabrous callus in front of scutellum; apex bisinuate, finely margined and about one-half as wide as base; sides explanate, converging to apex and feebly bisinuate; base strongly bisinuate; disc strongly convex; apical angles broadly rounded; basal angles produced and broadly rounded.

Elytra widest at apical one-third, with feeble impression on inner side of humerus; lateral margins explanate; finely densely punctate; slightly dehiscent apically. Scutellum finely densely punctate.

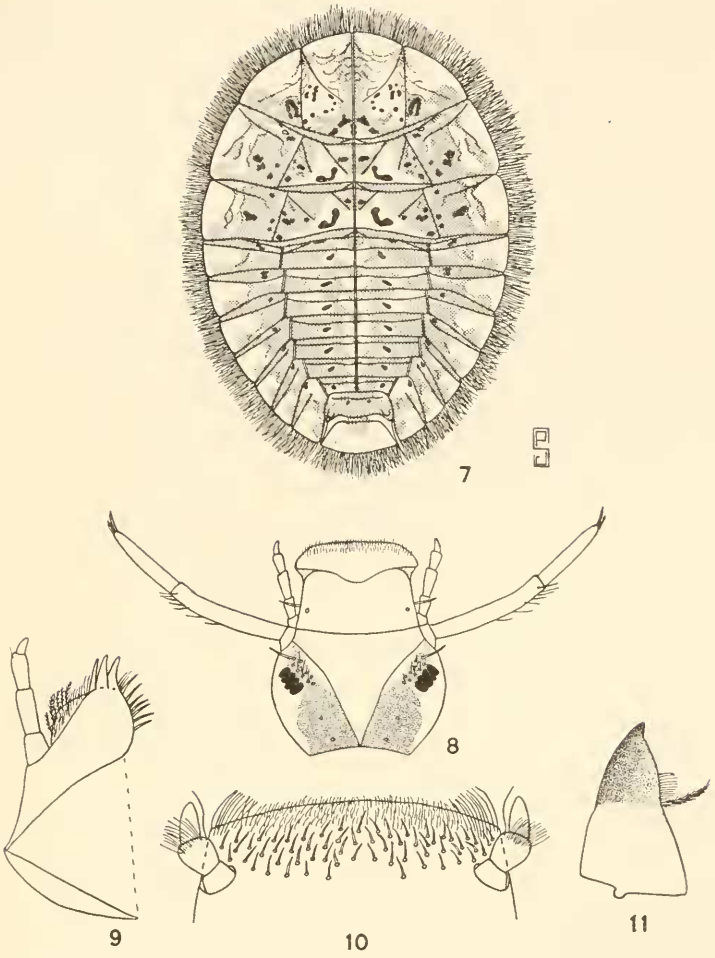
Prosternal process long, extending slightly behind anterior edge of mesocoxae, longitudinally carinate on midline. Mesosternum with narrow, deep, longitudinal sulcus. Metasternum swollen; incised between metacoxae; midline with very fine longitudinal ridge. Third ventral abdominal segment with yellow, glabrous, cicatrixlike depression along anterior edge; fifth ventral abdominal segment emarginate at middle along posterior margin; sixth segment triangularly incised leaving exposed two lateral lobes; seventh segment rounded at apex. Protibia slender, with fine, dark, lateral carina terminating in a small projection at apex. Tarsi each five segmented. First segment of fore and mid tarsus with dense pubescent pad beneath. Tarsal claw robust, moderately long.

Male genitalia trilobate (Figs. 4, 6). Parameres broad, stout, almost flat above; apical three-fourths concave beneath. Median lobe stout, divided into upper and lower parts (Fig. 5). Basal piece well developed, sclerotized, convex above and concave beneath.

Female.—Unknown.

Holotype.—Mexico, Durango, 11 mi. W. El Salto, VI–29–30–1964, Paul J. Spangler. Type No. 69084, deposited in the U. S. National Museum.

Comparative notes. This new species is similar to *Psephenus usingeri* Hinton but may be distinguished by its larger size, triangular instead of oblong-oval last segment of maxillary palpi, explanate margins of pronotum and elytra, and bicolored instead of concolorous dorsum as described for *usingeri.*



FIGS. 7–11. *Psephenus oresbius,* larva. FIG. 7. Dorsal view. FIG. 8. Head, dorsal view. FIG. 9. Right maxilla, ventral view. FIG. 10. Labium, ventral view. FIG. 11. Right mandible, ventral view.

DESCRIPTION OF THE LAST INSTAR LARVA

Length 10.1 mm, width 7.5 mm (Fig. 7). Testaceous above except for numerous brown maculae and a few short sinuous rows of asperities. Setal fringe around body entirely testaceous.

Body onisciform. Head hidden beneath broadly expanded anterior pronotal sclerite; dorsal surface (Fig. 8) with a wide, cream-colored, V-shaped area between ecdysial cleavage lines; a single long seta between ocelli and base of antenna and nine smaller setae along inner edge of ocelli. Lateral pronotal sclerites triangular. Mesonotum, metanotum and first seven abdominal terga with approximately rectangular lateral sclerites that are wider distally. All lateral sclerites fringed with setae distally. Eighth tergum with large spiracular opening at each posterolateral angle. Ventral surface of body creamy yellow. Head partly retracted into conjunctiva; clypeus emarginate medially; frontoclypeal suture distinct; labrum broad, short, covered with numerous fine seta-bearing punctures. Antenna cylindrical, apparently three segmented; basal segment short; penultimate segment long, slightly longer than ultimate segment; ultimate segment with 2 stout setae on apex. Maxillary palpus (Fig. 9) four segmented; basal segment short; second and third segments longer, subequal; ultimate segment small, oblong and narrowed apically. Galea with numerous setae apically. Lacinia with 3 stout setae on apex and 10 to 12 setae along inner edge. Mandible stout (Fig. 11) with apex unidentate and inner edge with a short row of setae near midlength; prostheca stout and densely plumose. Labial palpus (Fig. 10) apparently three segmented; first and second segments short, subequal; ultimate segment small and oblong. Abdominal segments 2 through 6 each with a pair of gills. Legs four segmented. Foreleg with elongate stout coxa; coxae widely separated; trochanter about a third shorter than coxa; femur stout, widest distally and slightly longer than trochanter; tibiotarsus stout, narrowing apically and one stout, short, curved claw on apex.

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A New Species of Microctonus (Hymenoptera: Braconidae) Parasitizing the Alfalfa Weevil[1, 2]

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Abstract

Microctonus colesi n. sp. is described from the eastern United States. This univoltine, unisexual species is a parasite of the alfalfa weevil, *Hypera postica* (Gyllenhal).

In 1963, Coles and Puttler reported an unidentified species of *Microctonus* from the alfalfa weevil, *Hypera postica* (Gyllenhal), in the eastern United States. Except for the coloration of the female, it was indistinguishable from *M. aethiops* (Nees). However, it is unisexual and oviposits in the larval stage of the host; *M. aethiops* is bisexual, and the female oviposits in the adult weevil. Subsequent studies uncovered morphological characters that were sufficient to distinguish this species from *M. aethiops*. With the increased emphasis placed on the study of natural enemies of the alfalfa weevil, it was essential that this new and possibly important parasite be named.

The terminology used for the following description is after Viereck (1916) and Marsh (1965).

[1] Accepted for publication November 9, 1967.

[2] *Hypera postica* (Gyllenhal) (Coleoptera: Curculionidae).

[3] I wish to thank Dr. P. Marsh, U. S. Department of Agriculture, Entomology Research Division, Agricultural Research Service, for permission to examine specimens in his care and for his suggestions on the manuscript.